

Fact Sheet
January 2002

Dust Waste Produced in Jewelry Manufacturing



JEWELRY MANUFACTURING WASTE STREAM

DTSC is one of six Boards and Departments within the California Environmental Protection Agency. DTSC's mission is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality, by regulating hazardous waste, conducting and overseeing cleanups, and developing and promoting pollution prevention.

State of California



California
Environmental
Protection Agency



What is this waste?

Jewelry manufacturing activities, such as deburring, grinding, and polishing, generate metal dust. Jewelry metal soldering, and melting or smelting, either in blow furnaces, induction furnaces, or in ladles or crucibles heated with a torch, also generate metal dust. In addition, some polishing compounds, such as tripoli, generate dust that contains silica.

Why is this waste hazardous?

Dust from melting, smelting, and polishing metals usually contains toxic silica and metallic "fine powders*" that are harmful to human health and the environment. Therefore, dust from jewelry manufacturing operations is usually considered hazardous waste [1].

Why must this waste be managed safely?

Because hazardous dust waste from jewelry manufacturing is harmful to human health and the environment, it is important to manage it safely, even if the waste contains precious metals. Current laws and regulations tell you how to manage hazardous waste in order to protect public health and safety, and the environment [2]. Jewelry Manufacturers can protect public health and safety, and avoid costly fines and penalties, by managing their hazardous wastes in compliance with these laws and regulations.

How should I manage this waste?

If your business generates a hazardous waste, it is your responsibility to properly manage that waste (please see the Department of Toxic Substances Control (DTSC) fact sheet on "[Hazardous Waste Generator Requirements For Jewelry Mart Operators](#)"). The recovery of precious metals from hazardous dust waste is considered hazardous waste treatment‡, and requires a permit or grant of authorization.

It is unlawful to dump any hazardous waste into the trash or onto the land, or to pour hazardous waste down the sink, into a storm drain, or down

* "Fine powder" is a metal in dry, solid form having a particle size smaller than 100 micrometers (0.004 inches) in diameter. (Cal. Code of Regs., tit. 22, § 66260.10.)

‡ "Treatment" is any method, technique, or process designed to change the physical, chemical, or biological character or composition of any hazardous waste or any material contained therein, or removes or reduces its harmful properties or characteristics for any purpose, including, but not limited to, energy recovery, material recovery, or reduction in volume. (Health & Saf. Code, § 25123.5 and Cal. Code Regs., tit. 22, § 66260.10.)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our web site at www.dtsc.ca.gov.

the toilet. It is also unlawful to allow hazardous dust waste from your jewelry manufacturing operations to accumulate on the floor, countertops, or other surfaces. It is unlawful to release hazardous dust waste, or any other hazardous waste, to the environment. You must collect and contain all of the hazardous dust waste that your business generates. One way to collect and contain your hazardous dust waste is by using negative pressure local exhaust ventilation and filtering equipment, such as hoods or fully enclosed grinding stations connected to baghouses, filters, cyclones, or electrostatic precipitators.

You are liable for the cost to clean up environmental contamination caused by the hazardous waste that your business generates. Please note that it is also unlawful to pay your employees with hazardous dust waste that contains precious metals.

If you want to treat any hazardous waste that you generate, or if you want to recover precious metals from your hazardous dust waste, you must obtain a grant of authorization or permit for onsite hazardous waste treatment. You can contact your local Certified Unified Program Agency (CUPA) for assistance, or DTSC at (800) 728-6942 if there is no CUPA in your area.

Can I send my hazardous dust waste to a company that recovers precious metals from the dust?

Yes. However, it can only be sent offsite† to a facility that is permitted to recover precious metals from hazardous waste. It is unlawful to use the United States Postal Service, or any common parcel carrier, or anyone other than a DTSC-registered transporter to transport your hazardous waste offsite. For information regarding transport requirements, please see the DTSC fact sheet on "Hazardous Waste Generator Requirements for Jewelry Mart Operators."

Can I reduce my costs by recovering my hazardous dust waste?

Yes. As noted above, you must collect and contain the hazardous dust waste generated in your jewelry manufacturing operations. There are special fil-

tration systems and floor mats designed to capture hazardous dust waste. If you trap your hazardous dust waste, you can protect yourself and your workers from exposure to the dust, and avoid fines and penalties. You will also be able to send more valuable waste dust to a permitted facility to have the precious metals recovered. The DTSC Office of Pollution Prevention and Technology Development (OPPTD) can help you reduce the loss of dust that contains precious metals. You can contact OPPTD at (800) 700-5854. For more information, please see the DTSC fact sheet "Jewelry Manufacturing Industry Pollution Prevention Recommendations."

Disclaimer

This fact sheet is intended to provide guidance for managing hazardous dust waste. This fact sheet covers only some of the basic management requirements under the Health and Safety Code and the California Code of Regulations. This document does not replace or supersede relevant statutes and regulations. This fact sheet was prepared in January, 2002 and is based on statutes and regulations in effect at that time. Interested parties should always review the most current statutes and regulations.

References

1. Cal. Code Regs., tit. 22, div. 4.5, ch. 11.
2. Health & Saf. Code, div. 20, ch. 6.5, and Cal. Code Regs., tit. 22, div. 4.5.

¥ The term "onsite facility" is summarized for purposes of this fact sheet to mean a hazardous waste facility at which hazardous waste is generated, and which is owned by, leased to, or under the control of the generator of the waste. (Health and Saf. Code, § 25117.12 and Cal. Code Regs., tit. 22, § 66260.10.)

† An "offsite facility" means a hazardous waste facility that is not an onsite facility. (Health & Saf. Code, § 25117.11 and Cal. Code Regs., tit. 22, § 66260.10.)

For questions, contact the DTSC Office nearest you, or call the regional Public and Business Liaisons at (800) 72TOXIC (1-800-728-6942) or visit www.dtsc.ca.gov

This fact sheet is also available in Armenian, Spanish, and Vietnamese.

Esta información se encuentra disponible también en armenio, español y vietnamita.

Այս իրողությունն էջերը տրամադրուած են Անգլերենով, Հայերենով, Սպաներենով եւ Վիէթնամերենով:
Tài liệu này được viết bằng tiếng Armenia, tiếng Tây Ban Nha và tiếng Việt